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Original Department.

CONCERNING THE DOCTRINE OF ARTIFICIAL PERFORATION OF THE MEMBRANA TYMPANI.

A Clinical Lecture by Prof. Josef Gruber,

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In the year 1862, in a lecture upon catarrhal inflammation of the middle ear, delivered before the Royal Society of Physicians in Vienna, I expressed the opinion that the formation and accumulation of exudation in the middle ear, accompanied by a narrowing or closure of the Eustachian tube on the same side, should be regarded and treated as a process connected with the formation of an abscess. Since that time this idea has been adopted by all rational aural surgeons, especially since it found such firm support from Schwartze. And, whereas at that time artificial perforation of the membrana tympani was only known as connected, twenty years previous, with an operation for the improvement in hearing in some cases of aural affection, it now belongs to the most common of surgical operations, more especially since my researches on the partial exsection of the membrana tympani have become fully known. Since that time it has become more and more evident that my opinion was correct, and, as by the timely opening of an abscess, or by a skillful alteration of an opening which already exists, we may hasten its cure and remove the dangers of an otherwise injurious advance of the process, so in suitable cases, by an artificial perforation of the membrane or an alteration of an opening already existing, if performed at the right time and with a proper knowledge of the subject, we are able not only to benefit the patient immediately in respect to his hearing, but also, assist him, so far as other affections connected with this disease of the organ of hearing are concerned. The views which others and myself have entertained, that such an operation in many cases of otitis media, suppuration may have a real *indicatio vitalis*, is now firmly established in the otological world. In cases of acute purulent inflammation of the middle ear, with intact membrana tympani, or where the membrane is already perforated but not at a point favorable to the escape of pus, it can very easily come to pass that through retention the pus is decomposed, and by such decomposition further injurious effects may be produced. Or, that the pus may pass from the organ of hearing to the cranial cavity, through the many passages which connect the former with the latter, and by thus invading the brain and its membranes bring about a *fatal issue*, which might have been avoided had we effected a timely removal of the pus by a paracentesis of the membrana tympani. The usefulness of an artificial perforation of the membrana tympani in such cases as have just been mentioned was so evident and agreed so fully with the general doctrines of our own surgical school, that its dissemination was no difficult task. As soon as the simplicity of the operation became known, and the readi-

ness with which the wound closed after the escape of the pus had been observed, the operation became one of frequent use, and we might even suppose—from the recent publications on this topic—that too great an enthusiasm had been kindled among the younger members of the profession, and that they should be warned against rashness. I mention this because many have endeavored to fix a precise time for the operation in cases of accumulation of exudation in the middle ear, which fact alone has demonstrated an insufficient knowledge of the disease, as well as an imperfect appreciation of the operation. Hence I cannot agree with Schwartze, when he says the third day of the process, if accompanied by uninterrupted severity, is the proper time for the paracentesis, although I agree most fully with this distinguished observer in other points respecting this question. Such an opinion has the same value as if a surgeon should say that if an abscess continue with unchanged severity without opening itself, the third day is the best time to open it artificially. It were, indeed, desirable to be able to express so mathematically in the surgical world that which indeed is obtained only by *invaluable* experience, and if any one pretends to express in figures the proper time for the undertaking of a surgical operation, it would be well for him, as well as his patient, if he retired from the practice of the healing art.

That which I have already uttered in my work on the treatment of diseases of the ear (page 50) respecting this point I must still firmly adhere to:—"If the eustachian tube is narrowed or closed, or on account of the rapid formation of the exudation is insufficient to carry off the accumulated pus, the artificial perforation of the membrana tympani, by means of paracentesis, is most urgently demanded."

What I have written at that point does not state the precise day of the disease on which the operation should be performed, but every specialist will have already learned by experience that under some circumstances he could have operated with advantage on the occasion of his first visit, while in other cases he could have waited a week, where the symptoms were not urgent. It has even happened to me, that timid patients, who have refused to permit the operation, have obtained relief by other means, and eventually recovered without any operation. On this account, however, we are not to suppose that the worth of the operation is diminished, since similar instances connected with other surgical questions can be quoted without detriment to the current theories, and I am of the opinion that by not giving such accurate data, "we not only *do not* perplex the non-specialist, but also satisfy our own consciences."

In such cases as have already been mentioned, I proceed to perform artificial perforation of the membrana tympani when the subjective symptoms are very urgent and I am able to benefit the patient in no other way, nor prevent his condition from becoming chronic and producing unpleasant as well as dangerous results. Before proceeding to this operation, in cases of catarrhal inflammation, we must not neglect to seek aid by means of the air douche. I mention this especially, because, in later days, from many quarters, the doctrine has gone out that we are unable, in cases of intact membrana tympani, to remove exudations of blood or purulent matters from the cavity of the tympanum by means of the air douche. Such assertions are founded on experiments made upon models, which can furnish no proof in the question before us—1st. Because such models, in general, cannot be made, even approximately, like the ear, and consequently, the physical properties of the ear cannot obtain in them. And, 2d. As I have frequently stated, we must take into consideration occasional individual peculiarities of the organ of hearing, which never occur in the unchangeable models; whereas, in the natural organ of hearing, they are sometimes of such a nature that we can, with ease, remove exudations, by means of the air douche, from any part of the tympanum. If we succeed, by the application of the air douche, in the partial removal of the exudation, which fact can be diagnosed both by the subjective and objective manifestations, we can then wait a little while, for it often happens that the exudations are either entirely removed by the repeated application of the air douche or that any fluids which may remain in spite of the introduction of air are gradually absorbed. In fact, the surrounding structures of the tympanum, and especially the lining membrane of the tympanum, appear to accomplish more in this respect than we are in general apt to suppose. I have frequently been able to diagnose large amounts of exudation in the

cavum tympani, which in a very short time were absorbed. In fact, you, gentlemen, have seen in the case before you this very same process. Two days ago, on the eighth day of his illness, when he came before *us* for *the first* time, we found on both sides excessive accumulation of exudation in the tympanum, which was evident from the appearance of the membrana tympani; this was found pushed outwards and discolored; while in the position of the handle of the hammer we saw a distinct furrow extending as far as the injected vessels which usually accompany the hammer. You know we found the Eustachian tube on both sides swollen and greatly narrowed, so that with difficulty, even during the act of swallowing, we were able to drive a little air into the tube, but without any improvement or alteration in the condition of affairs, so much so, that we delayed the artificial perforation of the membrana tympani for reasons which I previously explained. And to-day you see the yellowish discoloration only upon the smaller and inferior half of the membrane, at which point the exudation has collected, a fact which can easily be seen from the slight prominence of the membrane at that point. Besides the discoloration, the history and the clinical observation upon this patient, would enable us to make such a diagnosis. I do not doubt that the rest of the exudation will be absorbed and the patient recover without perforation of the membrana tympani. I desire to call your attention especially to the point that we should never delay the perforation of the membrana tympani, even in acute catarrhal cases, if we see that the process of the disease itself has partially brought about a perforation, though the escape of the exudation is very slow. And this assertion needs a further explanation. In cases of chronic catarrhal inflammation of the mucous membrane of the middle ear, accompanied by considerable exudation and collection of the same in the tympanum, it often happens that if the exudation can escape in no other way, it forces its way out by perforation of the membrana tympani. In cases of chronic catarrh, the membrane is already in a state of fatty degeneration, and hence predisposed to easy rupture. When such a condition of the membrana tympani exists it needs but a slight force—such as the act of sneezing, if the Eustachian tube is permeable—to split the membrane in all its layers. Of course, in such an event, the matter collected in the tympanum can easily escape if the rupture is both large enough and at a favorable place. But in many cases all these favorable circumstances do not occur.

It happens in some instances that the process of degeneration in the membrana tympani occurs from within outward. In such instances the different layers of the membrane must play an important *role* in the process, and the issue may be one of great importance in the welfare of the membrane and the organ of hearing. It is well known that the two layers of the membrana propria of the membrana tympani are less closely connected with each other than the layer of circular fibres is with the mucous membrane of the tympanum, or the radical layer is with the dermis layer of the external surface of the membrana tympani. Now let us suppose that the exudation breaks through the layer composed of mucous membrane and the circular fibres of the tympanic membrane, while the dermis layer and the radial fibres remain intact. In such a case the exudation may work its way between the two layers of the membrana propria, and subsequently produce a chronic inflammation of the membrana tympani, with all its attendant evils; or it may at last break through the remaining layers of the membrane, forming a fistulous canal, which is highly unfavorable to the escape of pus, and would in such cases prolong the process indefinitely.

I have seen cases in which the constant trickling of exudation through such imperfect channels of escape has kept up a constant irritation of the edges of the opening, which has led to the formation of granulations, and such complications that only the greatest familiarity with these processes could overcome.

In such cases of tardy perforation of the membrana tympani we should never delay the performance of artificial perforation, either at that point where the disease has already placed it, or at one more favorable for us—according to what has already been said on this point.

Until quite recently it has been believed that, in case of inflammation of the parts contained in the tympanum, when perforation of the membrana tympani has ensued, such a perforation would never close, or if it

closed would be necessarily accompanied by serious injury to the hearing. The usefulness of such a perforation was entirely overlooked, and its occurrence uniformly regarded as a most unfavorable symptom.

Hence, since the locality, shape, and attendant circumstances of the perforation were entirely disregarded, often results of the most injurious nature followed the chronic course of the disease, which might have been avoided had the process been properly comprehended. If we keep before us the idea that inflammatory processes in the middle ear, accompanied by the formation of exudation, resemble abscesses, our treatment must correspond with such an idea; and just as the good surgeon is not satisfied with an insufficient or an improperly situated opening in an abscess in any case, but endeavors to alter an opening of an unfavorable nature, so must we, in many cases, as has already been shown, try to better the imperfect opening in the membrana tympani, either by lengthening one which exists, or by making a second if the existing one is insufficient to carry off the exudation.

In this connection I would say that the exudation obtains its most favorable exit when the opening is in the posterior and inferior quadrant of the membrana tympani.

Therefore I have always chosen this point for the operation in such cases as have already been mentioned, and have both taught in my lectures and have published in an article in the *Allgem. Wiener Medic. Zeitung*, January, 1871, that in cases of such a nature, accompanied by otorrhœa, or in cases of an acute nature, when the perforation has occurred on the anterior segment of the membrane, and the pus has not been able to escape to a proper degree, that the original opening should be widened in the proper direction and extent, or, in case the excision would be too great, or other hindrance should obtain, we must try then to make a second opening in the posterior and inferior quadrant of the membrane.

If exudation has collected in the anterior half of the tympanic cavity, and the opening is in the posterior and inferior quadrant of the membrane, then we, as well as the patient, have a means of forcing the exudation through the opening in the membrana tympani. As often as the patient blows his nose, provided the Eustachian tube is open, he forces air into the tympanum, and thereby the collection of exudation backwards and out through the perforation in the posterior and inferior quadrant of the membrana tympani. We can do the same thing by using the air douche and the catheter, and thus free the tympanum of its exudations. If the opening is in the anterior segment of the membrane, the exudation, by all these operations, can easily be forced from the anterior to the posterior half of the cavity of the tympanum, but in *no case* can the exudation in the posterior half of the tympanum be forced into the anterior half of the same, and through the opening in the anterior segment of the membrane.

We hear, even in the present day, many complaints of obstinate otorrhœa in cases of perforation, and loss of substance in the membrana tympani, which defy all means of cure, whether applied through the external meatus or through the Tuba Eustachiana.

I feel that all aural physicians of any experience will agree with me when I assert that the cause of such truly annoying cases lies in the imperfect regard paid to the objective condition of the membrana tympani, and you only need to observe the cases at present operated upon and under treatment, in order to meet hereafter even those cases of so-called chronic otorrhœa which have heretofore defied all treatment.

In the cases to which I have alluded, the artificial perforation of the membrana tympani has had as its chief object the removal of foreign masses from the middle ear, and by the prevention of further injurious effects, the preservation of the hearing.

In other cases, however, the artificial perforation of the membrana tympani has for its object the improvement of the condition of the membrane and the ossicles of hearing in connection with it. It would occupy too much time for me, to-day, to allude to all the facts connected with this point. Permit me, however, to say, that the opinion which I have expressed in my book ("Lehrbuch der Ohrenheilkunde"), viz., that the artificial perforation of the membrana tympani has sometimes the character of an explorative operation, is well founded. What I have said at that place on this subject, viz., that by the most varied alterations on the membrane, in part seen by the eye, and partly not easily diagnosed, the sound conducting powers of the membrane are interfered with, and that these alterations may

be overcome by a suitable operation of Myringotomy, has been proven by my own researches on this point (*Ueber Anomalien in der Spannung des Trommelfells. Monatsschrift fur Ohrenheilkunde*, 1871,) as well as those of Politzer and Voltolein, and thereby the science of Otology has made an advance in its therapeutics, the rich blessings of which will soon become manifest.

COMMUNICATIONS.

AN EXAMINATION OF PROF. REESE'S "REVIEW OF THE TRIAL OF MRS. WHARTON FOR THE MURDER OF GENERAL KETCHUM."

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(*Continued from No.* 796.)

The State charged that General Ketchum died from poison, and introduced various medical witnesses to prove that fact. Dr. Williams, Professors Chew, Miles, Donaldson, of Baltimore, and Professor Thompson, of Washington, all testified that he died from "non-natural causes," which in this case, as has already been shown, meant *poison*. Professors Aikin and Toury, of Baltimore, and Dr. Craig, of Washington, testified that the poison administered was *tartar emetic*. The State therefore charged that General Ketchum was poisoned with tartar emetic.

The defence denied the charge, and asserted that he died by disease, and introduced Professor Reese, of Philadelphia, Dr. McClurg, of Pennsylvania, Professors Warren and Byrd, and Drs. Morris, Goolrich, and Baltzell, of Baltimore, and Dr. Simpson, U. S. A., and Dr. Claude, of Annapolis, to prove it. Not only did the defence assert that General Ketchum died from disease, but it went further, and narrowed the question down to one disease, and claimed that he died from cerebro-spinal meningitis.

We thus see that the only question before the Court was whether General Ketchum died from poison by tartar emetic, or whether he died from cerebro-spinal meningitis.

The defence took the responsibility of showing that he died from cerebro-spinal meningitis, and assumed a burden of proof which legitimately belonged to the State. Having assumed this position, it was bound to prove it beyond all reasonable doubt, or admit that he died from poison by tartar emetic.

No other issue was before the Court. The defence, therefore, undertook to prove that he died from cerebro-spinal meningitis, and restricted itself to the *fulminant form of that disease*.

Now did General Ketchum die from fulminant cerebro-spinal meningitis? With one exception (Dr. Goolrich) all the experts for the defence, in their *testimony in chief*, stated, more or less positively, that this was true; they claimed and attempted to prove that he died from fulminant cerebro-spinal meningitis. Dr. Warren is most emphatic, and says, "The case of General Ketchum, from the *first pain to the last convulsion*, in all its phases, bearings and combinations, illustrates nothing more or less than a typical example of that form of cerebro-spinal fever to which the name of *fulminant* has been so aptly given, as indicating the suddenness of its invasion, the intensity of its phenomena, the rapidity of its march, and the fatality of its termination. In my opinion *no other theory* will explain the history of his sickness and death; *nothing else* will adequately account for all the facts which have been detailed in this case."

This opinion Dr. Warren asserted *to the last*. The other experts were generally decided in a similar opinion during their testimony in chief. During their cross-examination, however, they were compelled to modify their statements very materially.

Professor Reese, in his testimony in chief, said, "The *only disease* to which I could refer the symptoms in General Ketchum's case *is cerebro-spinal meningitis*." This seems to be positive; yet, during his cross-examination, he is forced to modify this opinion so far as to say, "I do not wish to be understood as asserting that General Ketchum died from cerebro-spinal meningitis; I think the cause of his death obscure, but the absence of certain pathological lesions would indicate that he died from that disease." Then again he said, "There is a *possibility* that General Ketchum died from *idiopathic tetanus*, and a *probability* that he died from cerebro-spinal meningitis; probably it might be attributed to many causes, and there are many causes to which it could not be attributed; *it may possibly be attributed to poison*."

Professor Byrd is rather doubtful, even in his testimony in chief. He says, "The disease bears no positive resemblance to any with which I am acquainted; in some of its features it resembles the disease known as cerebro-spinal meningitis; *taken as a whole*, however, it bears no resemblance to any disease with which I am acquainted."

Dr. Claude, on his cross-examination, said, "I have *not* said that my conclusion was that General Ketchum died of cerebro-spinal meningitis; I am not prepared to say positively and decidedly what was his disease." Again he said, "I incline to the opinion that General Ketchum died from a natural cause, *but I am not able to say what that cause was!*"

These are the opinions expressed by the medical experts of the defence, based upon a hypothetical question prepared by the defence, which, of course, presents the case in the most favorable light for the "accused." With the exception of Dr. Warren, not one of these experts, Professor Reese included, ventured, upon his cross-examination, to maintain that General Ketchum died from cerebro-spinal meningitis. It seems to me that such a remarkable result shows very clearly that cerebro-spinal meningitis was not, in their opinion, the cause of General Ketchum's death.

The experts encountered another serious difficulty, and that was to fix *the time* at which the General was attacked with cerebro-spinal meningitis. If they said that he was attacked by cerebro-spinal meningitis with "his first pain" on Saturday night (as Dr. Warren said), it would be fatal to the whole theory of death by its *fulminant* form! On the other hand, if they said he was not attacked until Tuesday night or Wednesday morning (which would be necessary in order to constitute it the fulminant form), they would involve themselves in the dilemma of being compelled to explain the previous sickness of Saturday, Sunday and Monday, an explanation that might prove very embarrassing! They seemed to realize this embarrassment, and therefore they speak very doubtfully about the time of its commencement. For example, Dr. Warren says, "I cannot speak with accuracy as to the time cerebro-spinal meningitis began; the *first vomiting* showed, in my opinion, the *premonitory symptoms of the disease.*"

What? Premonitory symptoms of a disease that (according to Dr. Warren's own testimony) "attacks without premonition, and kills with the celerity of lightning"!!

Dr. Warren then adds, the disease "had been present for *several days, and fulminated on Wednesday*"!!

Professor Byrd says, "It is very difficult to say when he was attacked with cerebro-spinal meningitis; the symptoms stated in the hypothetical question are not sufficiently connected to enable me to decide that it was a case of cerebro-spinal meningitis"!

Professor Reese says, "His disease may have commenced when he had his first sickness," that is, on Saturday night. How, then, could it have been *fulminant?*

Dr. Baltzell says, "It may have set in on Saturday night;" but "from the hypothetical statement I would say that the disease commenced on Monday or Tuesday, and *fulminated on Wednesday*"!!

But let us overlook this difficulty, and admit that it began either on Saturday, Sunday, Monday or Tuesday, and that "*it fulminated on Wednesday*," what are the symptoms by which they recognized the presence of this mysterious disease "that was without beginning of days?" On this branch of the question the experts are "at unity with themselves."

First. They all agree that *headache* is a most important and even a characteristic symptom.

Dr. Warren says, "I mentioned headache as one of the symptoms; indeed, it is one of the most constant symptoms."

Dr. Morris says, "Headache and vomiting are the first symptoms; headache was in all the cases I had; I never saw such a case of headache as poor Armer (one of his patients) had."

Professor Reese says, "Pain in the head is certainly one of the accompaniments of the disease. I think headache one of the most characteristic symptoms."

Professor Byrd says, "Headache is one of the most constant symptoms; as long as my patients were capable of complaining, they complained of headache."

Dr. Baltzell says, "Headache is present as long as sensation lasts."

This is certainly very positive language; and yet there is not one word of testimony to show that General Ketchum had even the slightest headache. To no one of his numerous attendants did he complain of headache. He certainly never complained of it

to me in any of the visits I paid him. He had no headache at any time.

Professor Reese distinctly states that he "had no recollection of any witness testifying that General Ketchum had headache."

The next symptom upon which the experts relied was "*suppression of urine.*" Upon this point they are also emphatic and unanimous.

Professor Byrd said, "Suppression of urine is a very important point, and in certain conditions it constitutes an unfailing symptom. In both my cases total suppression of urine was observed."

Dr. Baltzell said, "I have never observed a case of the fulminant or semi-fulminant form which was not attended with suppression of urine." Professor Reese uses similar language, and regards "suppression of urine an important and prominent symptom."

Dr. Warren said, "There were *suppression and retention* of urine in a most remarkable degree," and then he added, "finally the *ominous fact* that he passed no water during the whole of Tuesday, and that though none was on Wednesday in the vessels of his chamber, and his bladder was not preternaturally distended, in other words, that there was decided suppression of urine, completes the line of demarcation, and furnishes the data for an exact discrimination between the malady from which he died, and the antimonial poison to which it is alleged he succumbed."

To say nothing of the incorrectness of making suppression of urine the pathognomonic symptom of cerebro-spinal meningitis, we have here in Dr. Warren's testimony a novel mode of establishing suppression of urine, in the fact that the General's "bladder was not preternaturally distended with urine!" We have also the most astonishing discovery that "there was *suppression and retention* in a most remarkable degree!" But leaving this extraordinary fact for Dr. Warren's further contemplation, let us observe that there is not the slightest evidence to show that there was suppression of urine, except the statement of Susan Jacobs, who said, *on the stand,* that she "found no urine in the General's room on Tuesday;" yet, during the General's sickness, and on Wednesday morning, she told me that "*there had been urine, and she had emptied it!*"

Which statement is most truthful I leave the reader to decide, especially as the statement on the stand was *post-factum!* One hour before the General's death I found "his bladder full of urine," and so stated on the stand! How then could there have been suppression?

Another symptom relied upon by the experts is *hyperæsthesia.* Dr. Morris said, "this hyperæsthesia continued in all my cases. The pain is so excessive that the patient cannot bear to be moved."

Dr. Baltzell said, "Hyperæsthesia was present in that, and in all the fatal cases I saw."

Professor Reese also mentioned "Hyperæsthesia as one of the symptoms."

Dr. Warren said, "Hyperæsthesia is one of the symptoms of cerebro-spinal meningitis. It was present in most of the cases I saw. I mean to say that it is present in the majority of cases, and whether slight or excessive it is a very important symptom." Again he said, "No fact in this case, except that Dr. Williams found that a shiver passed over General Ketchum when he touched him, brought me to the opinion that he had hyperæsthesia; you can't make anything else out of it"!!

This was certainly a remarkable form of hyperæsthesia, which was developed only when I laid my hand upon him to rouse him, and yet I could move him to his bed, undress him, handle him in every way, without the slightest evidence of discomfort or suffering!

The last symptom referred to by the experts, and upon this point they were also unanimous, was Opisthotonos. Now it seems to me that no one can read the description of General Ketchum's condition during his whole sickness, and fail to see that there was no evidence of such opisthotonos as exists in cerebro-spinal meningitis. There was constant rigidity of the muscles of the neck, back and limbs, but there was no opisthotonos except during the convulsions that occurred *after the administration of the medicine at one o'clock.* During those convulsions there was opisthotonos, and then the General could not lie on his back, but was invariably thrown upon his side by each convulsion. When the convulsion was over he would resume his position on the back. This is very different from the opisthotonos of cerebro-spinal meningitis. In that disease the opisthotonos occurs *early,* and is

permanent. The patient *cannot lie on his back*, he must turn more or less completely upon his side. In the General's case, the opisthotonos did not exist until a short time before his death, and then it was intermittent, and lasted only during the convulsions, and presented a marked contrast with that form that characterizes cerebro-spinal meningitis! But even if there had been opisthotonos, it must have existed in *combination with other symptoms* in order to indicate the presence of cerebro-spinal meningitis; and those symptoms were absent in this case.

I have thus shown that General Ketchum had no headache, no suppression of urine, no hyperæsthesia and no opisthotonos. In other words he had no symptom which the experts for the defence claimed to be characteristic of cerebro-spinal meningitis. The experts for the defence also relied upon the "*negative results* of the post-mortem" to prove the existence of cerebro-spinal meningitis. Let us examine this point for a few moments.

What is cerebro-spinal meningitis? Authorities agree that it is "an acute epidemic disease, produced by some blood poison, which causes inflammation of the membranes of the brain and spinal cord, especially at the base of the brain and the upper end of the cord."

Can such a disease prove fatal, and leave no lesions appreciable by human senses? The experts admit that such lesions must be found after death from the ordinary type of the disease, but that in the *fulminant* form the disease proves fatal so rapidly as to leave no time for the development of lesions.

Can any *inflammatory disease* prove fatal, and leave no post-mortem traces of its existence? I am perfectly willing to agree with the experts that many diseases prove fatal without leaving discoverable post mortem lesions, such as "epilepsy, sunstroke, chorea, hysteria, and infantile convulsions." But none of these are *inflammatory!* Let us bear in mind that in cerebro-spinal meningitis (as in every other disease) it is not the *symptoms that make the disease, but the disease that makes the symptoms, and that before any symptoms are manifested there must be antecedent disease!* The headache, the hyperæsthesia, the suppression of urine, the opisthotonos, as well as all the mental and nervous disturbances incident to this disease, must result from some preceding lesion, and are produced by the blood poison causing inflammation of the membranes referred to.

Some authors and physicians fail to discriminate between cerebro-spinal meningitis and typhus fever, or spotted fever, which are not inflammatory, and, of course, such persons see many cases prove fatal without any discoverable post-mortem lesions. Again, there must be symptoms and lesions *characteristic* of a given disease before we are justified in assigning a specific name for it. It is inflammation of the cerebro-spinal membranes that constitutes cerebro-spinal meningitis a distinct disease, and separates it from typhus fever, spotted fever, or any other disease; it is this that justifies us in calling it a specific disease.

Furthermore, the various forms under which a disease is described do not convey, nor are they intended to convey, an idea of difference in *kind*, but simply a difference in *degree*. Therefore, the fulminant and the simple forms of cerebro-spinal meningitis do not differ in *kind*, but *in degree*, and their post-mortem lesions are influenced not by any essential difference in the disease, but by the duration of the disease.

As a rule there are greater post-mortem lesions observed in ordinary, simple cerebro-spinal meningitis than in its fulminant form; simply because there has been more time given for the production of lesions; but *in every case*, however slow or rapid may be its course, there must be the same essential lesions, differing, perhaps, in extent or degree, but not in kind, or we are not justified in affixing a specific name to that particular case.

For example, a patient may have fever, pain in the side, and cough, and may die while manifesting these symptoms, and you say that he died with pleurisy. Now you make a post-mortem, and you find no evidences of inflammation of the pleura. Would you be justified in saying that such a patient died from pleurisy? Would not this fact alone compel you to say that he did not die of pleurisy? So in cerebro-spinal meningitis! However much symptoms may resemble the disease during life, still if the post-mortem examination fails to show inflammation of the cerebro-spinal membranes, we are thereby prohibited from saying that he died from cerebro-spinal meningitis.

What post-mortem lesions would we expect to find? We recognize *from results* as following inflammatory action, viz., congestion (or hyperæmia) effusion of serum, effusion of lymph, and the development of pus. Now it is perfectly comprehensible that a patient may die before *all these changes take place;* but we must *always find one or more of them.* No man can die of cerebro-spinal meningitis, I care not how soon, without the existence of acute hyperæmia of the membranes involved in the disease.

You must have the congestion, or you can have no symptoms of cerebro-spinal meningitis. If the patient live longer, you will find effused serum, lymph or pus. *One or all* of these results must be found in every case. It is as impossible in medicine, as in any other science, that *negative results* can be relied upon to prove the existence of anything. They may demonstrate that a given disease does *not exist*, but they cannot prove that it does.

This view seems fully corroborated by Professor Byrd, in the following extract from his testimony, viz. :—"In the two first cases I attended the lesions were quite marked; one of the cases lasted *forty-eight hours*, and the other several days. I saw *pus* as well as *lymph*." We here see that though one of these cases died in forty-eight hours there were "*marked*" post-mortem lesions. Professor Byrd saw both *lymph and pus!* A most careful examination of General Ketchum's brain and spinal cord, even under the microscope, failed to detect the slightest evidence of inflammation in its membranes or elsewhere. It seems clear, therefore, that, judging even from the testimony of the medical experts for the defence in this case, there is nothing either in the symptoms or clinical history of General Ketchum during his life, or in the post-mortem examination of his body, to justify any one in saying that he died of cerebro-spinal meningitis.

This conclusion was fully sustained by Professors N. R. Smith, Howard, and Johnston, and by Drs. Arnold, Benson, Morgan, and Ohr. All these gentlemen were put on the stand, and after reading the hypothetical question propounded by the defence testified positively that General Ketchum did not die of cerebro-spinal meningitis! Here I might stop, and claim that inasmuch as it is clear, even from the testimony of the defence itself, that General Ketchum did not die from cerebro-spinal meningitis, therefore he must have died from poison by tartar emetic.

But some of General Ketchum's symptoms are so striking in their bearing upon poison by tartar emetic, that I hope I may be pardoned for trespassing a little longer, and calling attention to some of them. The chief difficulties encountered in explaining the symptoms of General Ketchum consist in the absence of vomiting and purging, and in the substitution of muscular rigidity and tetanic convulsions for the *extreme relaxation* which the experts for the defence claim to be characteristic of poison by tartar emetic. Cases of *acute poison* by tartar emetic are rare; and the experts have erred in confounding the effects of *fatal* doses of tartar emetic with those resulting from *large medicinal doses*, even where the consequences have been very serious, though not fatal. I need hardly mention so familiar a fact that very various effects result from the same drug when given in different doses; and that it would be very unsafe to predicate the effects of a fatal dose of any drug by the results we have witnessed from an ordinary medicinal dose. The experts for the defence also erred in assuming that the State charged that General Ketchum received *poisonous doses* of tartar each time that it was administered. Let us look at these two points for a few moments.

1st. The State, by all its medical witnesses (that were examined upon the point), Drs. Williams, Chew, Miles, Donaldson, and Thompson, admitted that the usual results of large doses of tartar emetic were vomiting, purging, profuse sweat, extreme prostration, great muscular relaxation, etc. On this point there was no difference of opinion between the medical witnesses for the State and those for the defence. The difference between them arose from the fact that the State claimed that *at times* there was no vomiting and purging, no extreme muscular relaxation; but that, on the contrary, there was oftentimes great rigidity of the muscles, accompanied by violent tetanic convulsions.

This latter view is sustained by the very highest authority. I will give only a few that were cited during the trial. First, I will refer to cases of children treated for croup with large doses of tartar emetic. In the *Medical Times and Gazette* for July, 1856, page 7, Dr. Elliotson says: "By the fourth day, when twenty-seven grains had

been taken, the disease (croup) was much alleviated; there had been *tetanic* symptoms. The arms and legs had been *rigid*, hands and feet turned inward, the thumbs drawn upon the hands; *the head drawn backwards; the jaws closed*, so that fluids could be introduced *only by the forcible use of the spoon.* Elliotson also gives two cases that Dr. Alfred Taylor quotes from the *Lancet*, in which two children swallowed a powder containing ten grains of tartar emetic mixed with sugar. In *twenty minutes* they were seized with vomiting, purging, convulsions, and *tetanic spasms.*" The boy died in eight hours, the girl in thirteen. "Taylor's Medical Jurisprudence," fifth American edition, 1861, gives, on pages 123, 124, 125, numerous cases in which violent tetanic convulsions resulted from large doses of tartar emetic.

Professor Harry Thompson, medical expert for the State (page 57 *Gazette's* Report), gives a case of a woman who took *ten grains* of tartar emetic, which was followed by the usual symptoms of vomiting, purging, etc. The same evening she took a second dose, which produced "very little purging and vomiting;" "her pulse became rapid and feeble, skin cold and clammy, face of a dusky hue, and she died in *violent tetanic spasms.*" Virchow, in his "Manual of Special and General Pathology and Therapeutics," 1855, page 102, speaks of *cerebro-spinal affections* resulting from tartar emetic, in which he shows that when vomiting and purging fails to take place the *nervous* disturbances are much greater. He gives cases attended with violent tetanic spasms and convulsions.

These quotations might be extended indefinitely; I have confined myself to those cases that were quoted in court during the trial.

Authorities also show that tartar emetic may be given in immense doses, even as much as half an ounce, without producing vomiting or purging, and also show that these results may be deferred for a long time after the dose has been taken. (See "Taylor's Jurisprudence," etc.)

These authorities, and others that might be quoted, show that poisonous and even fatal doses of tartar emetic may produce just such symptoms as were manifested in General Ketchum.

(To be Continued.)

SURGICAL CASES:—INJURIES OF THE EYE—MALIGNANT GANGLION—HÆMATOMA.

By M. M. Brown, M. D.,
of Ithaca, New York,

Injuries to the Eye.

On the 30th of May, 1870, a gentleman brought his son, æt. 14 years, to my office, making the following statement:—

"My boy was painting a small boat in one of the upper rooms of my residence this forenoon, and becoming tired of work amused himself by shooting at a mark with a bow-gun. By accident, or purposely, he dipped the arrow into his pot of white lead. His mark was a door-knob. He hit the mark, but unfortunately the arrow glanced and rebounded, hitting him in the left eye. The arrow had a wire about one-eighth of an inch in diameter, and one inch and one-fourth in length projecting from its point. This passed into the eye ball at a point which you now discover, carrying considerable lead within the coats of the eye, as is plainly visible. Now, Doctor, do your best to save his sight."

Before operating, I called in Dr. S. H. Peck, who administered the chloric ether. When he was fully under its influence I enlarged the opening made by the wire, and scooped out nearly all the paint. A small quantity of the pigmentum nigrum escaped, also a trifle of the vitreous humor. The arrow entered the tunics about one line from the margin of the transparent cornea, and about midway between two lines running from the centre of the cornea, one to the outer canthus, the other to the centre of the upper lid. I have no doubt but that the wire passed obliquely through the vitreous humor and into the retina.

I closed the lids with adhesive plaster, and covered the eye with a light bandage, and ordered a carriage to convey the little sufferer home. I then had him placed in a dark room, and ordered his mother to administer a dose of salts (magnesia sulph.). I also left a preparation of aconite, to be given regularly, and gave orders to the nurse to keep the room perfectly quiet, and after the cathartic had operated, to give an opiate which I had also prepared. The shock to the brain and nervous system was quite extensive, chills and rigors coming on soon after he was confined in his room. The following day considerable inflammation su-

pervened, which I combatted with topical applications (bisulphite of soda, in weak solution) applied cold, continuing small doses of the Epsom salts, and the aconite. Several doses of the Dover's powder at intervals of six hours arrested the chills and rigors, and also assisted the aconite in keeping the skin moist.

The patient made a rapid recovery, and to-day the keenest observer could not detect the injured eye by any external irregularity.

Some four months after the lad had been able to be about he was sent to school, but his sight began to fail in both eyes, and by my advice he was kept from books and the school room.

About eight months after the injury he was obliged to wear glasses, he being unable to distinguish objects any great distance from the eyes (myopia apparens). Several short-sighted glasses were procured, but he could not see with them as well as with the naked eye.

The father then purchased a pair of long-sighted glasses, suitable for a person eighty years of age, which so much improved his vision that he was able to read quite well. He has not been allowed to go to school any to speak of since he was first taken out, and to-day he is almost entirely recovered. Why was it that convex lenses were applicable to a case of apparent *myopia*?

Not long since I treated an infant's eye that was severely wounded by a pair of scissors. The mother was supporting the child between her feet while sewing. She carelessly laid her scissors upon her knee. Soon after, having occasion to get up for something, the instrument dropped down, the blades opening, one of them entering the ball of the right eye, a trifle above the centre of the pupil. The aqueous humor nearly all escaped, and the iris protruded, forming a considerable hernia. Some little time having elapsed before the patient was brought to my office, I was unable to reduce the protruding parts. I, therefore, removed the hernia with a suitable pair of scissors. The after treatment was the same as for cataract. The eye is now good, and useful vision preserved, which speaks well for the curative powers of nature.

Malignant Ganglions.

I have now on hand an interesting case of malignant ganglionic tumors. Miss Lou G., aged 23 years, florid complexion, scrofulous cachexia, applied to me some months ago to treat a crippled hand. She had not been able to use the diseased member for more than a year. She attributed the cause of the tumor to playing on an accordeon when a child. She had passed through the hands of several physicians, who had blistered, steamed, iodined, compressed, all to no good, the hand constantly growing weaker and the tumor larger. I at once opened the ganglion, and there escaped a large quantity of pus and sanguineous fluid, emitting a very offensive odor. I then applied compresses, and in a few days the sack refilled, and finally became more tumefied than ever. I concluded now to remove the sack entire, which I did, exposing the nerves, bloodvessels and tendons supplying the index and second fingers. The operation was quite difficult, as the sack was adherent to all adjacent parts. I administered tonics and the following alterative:—

℞. Fluid ext. pipsis,
" rumex crispus, aa ℥i.
Potass. iodidi, ℥iij.
Aquæ font., ℥ij.
Syrup sarsaparillæ, ℥iv. M.
S. Teaspoonful three times daily, one hour after each meal.

She soon improved after taking this treatment, and has the perfect use of her hand. A second and third ganglion has appeared about other tendons, but by opening them early, and injecting a solution of carbolic acid, and applying compresses, they have given no serious trouble. The cicatrix which resulted from the removal of the first tumor has an unhealthy appearance still, being covered with scales, and occasionally a trifle of pus exudes from its surface. The patient is still taking the above alterative and tonics. I hope for her entire recovery.

Hæmatoma.

Last Saturday a young man who resides in Freemansburg called at my office to consult me in reference to a wound which he had received a few days previously, by falling from a horse. On examination I found two large swellings, one at the seat of injury, the other near the lower border of the patella. The whole dorsum of the foot was purple, and the veins much distended. The wound was about six inches above the ankle joint, on the right leg, directly over the saphena vein. By palpation I discovered free fluctuation. I was not positive

what was contained in the swelling, but made up my mind to find out at any rate. I therefore used a bistoury to make a free opening. As soon as this was done, out fell a number of black clots.

I removed about one pint of clotted venous blood, holding my fingers over the vein to prevent the entry of air. When I had done, the swelling at the knee-joint disappeared, and the whole limb became much smaller. I applied compresses all along the saphena, from the opening to the patella, and then applied a roller as tight as could be borne, from the toes to the knee.

I have not seen the patient since, but have no doubt he is doing well.

Editorial Department.

Periscope.

Eucalyptus Globulus in Intermittent Fever.

About two years ago Dr. Lorinser, of Vienna, laid before the profession the results of his observations on the treatment of ague by the *Eucalyptus Globulus* (*British Medical Journal*, May 21, 1870). A supply of the tincture was placed, for the purpose of observation, at the disposal of medical men connected with the railway stations in localities where ague was frequent. The quantity, however, was but small; and a larger supply was distributed in May of last year. The results obtained during the summer have been collected and summarized by Dr. Joseph Keller, Chief Physician of the Austrian Railway Company.

The number of patients treated with tincture of eucalyptus was 432. Of these 310 (71.76 per cent.) were perfectly cured, and 122 (28.24) required to be afterwards treated with quinine. Of the 310 patients who were cured, no paroxysm occurred after the first dose in 202; in the remaining 108, there were one or more subsequent paroxysms, which, however, yielded to repeated doses of the medicine. Quinine had been given without result in 118 of the 432 cases; 293 of the patients had had ague in previous years, and 139 were attacked for the first time in 1871. Of the 122 cases in which the eucalyptus failed, 58 recovered under the use of quinine, 38 were not cured, 10 were sent home, and 16 remained under treatment. Of the 118 cases in which quinine had been given unsuccessfully, 91 recovered under the use of eucalypatus, and in 27 no result followed.

The several types of intermittent fever were represented as follows:—quotidian, complicated, 117, simple 73=190; tertian, complicated, 126, simple 95=221; quartan, complicated 16, simple 4=20; quintan, complicated, 1. The complications were, enlargement of the spleen or liver, anæmia or chronic gastric catarrh, paludal cachexia, etc. The remedy was successful in 161 of the 260 complicated cases, or 61.9 per cent.; and in 149 (or 86.6 per cent.) of the 172 simple cases. The percentages of success in the several types were: in tertian, 75.57; in quartan, 70; in quotidian, 67.89. Among the cases in which the first dose of eucalyptus arrested the disease, were 95 complicated and 107 simple; 28 of the former and 20 of the latter had previously been treated unsuccessfully with quinine. In the cases where the paroxysms recurred, there were 70 complicated and 38 simple; quinine had been given without success in 27 of the former, and in 15 of the latter.

Of the 432 patients, 353 were men, 46 women, and 33 children. There were 155 patients who were immigrants into the localities; and in these the disease was more frequently attended with complications, and the treatment was less successful than among the indigenous inhabitants.

The treatment was generally commenced on the fifth day after the first paroxysm of ague; its duration average 9½ days, that with quinine in previous years having been 12½ days.

The tincture was made by dividing into small pieces the leaves of eucalyptus obtained through France from the native country of the plant, and macerating in alcohol for three months. Ten pounds of leaves yielded twenty-five quarts of the tincture. The average dose was two drachms; and the average quantity used for each patient was seven drachms—this, however, varied much, according to the nature of the case and its complications.

Dr. Keller concludes that eucalyptus must be regarded as a very important remedy for ague; but that the plant as cultivated in Austria is less efficacious than that imported from its native soil; that the remedy is of service especially in obstinate cases of ague where quinine has been given unsuccessfully; and that the average duration of treatment by eucalyptus is shorter than that by quinine. He believes that the tincture is the most eligible preparation of the plant, as the essential oil is retained.

Reviews and Book Notices.

NOTES ON BOOKS.

Recent German Medical Works.

Among the German medical publications of the present year we may mention the following:—

Arbeiten aus dem physiologischen Laboratorium der Würzburger Hochschule. Herausgegeben von *A. Fick*. [Aus "Verdhandlungen der physikalisch-medizinischen Gesellschaft."] 1. Lfg. *Wurzburg*, 1872. *Stahel*, 8o. p. 1—89. *Mit 6 Steintaf.*

Beiträge zur Geburtshülfe und Gynäkologie. Herausgegeben von der Gesellschaft für Geburtshülfe in Berlin. I. Bd. 1—3. Hft. *Berlin*, 1870—72. *Hirschwald*. 8o. 154, XXXVI, 197 pp. *Mit 15 Taf.*

Die gesammte Physiologie des Menschen nach dem Standpunkte der Wiener medizinischen Schule. Herausgegeben von der Redaction der "allgemeinen Wiener medizinischen Zeitung" Chefredacteur *B. Kraus*. [Aus "allgemeine Wiener medizinische Zeitung."] *Wien*, 1872. *Sallmayer & Co.* 8o. VII, 835 pp. *Mit eingedr. Holzschn.*

Roth.—Die Arzneimittel der heutigen Medicin mit Formeln ihrer Anwendung und einem therapeutischen Repetitorium als Anhang. Taschenbuch für Aertze. *Wurzburg*, 1872. Stuber. 8o. XV, 199 pp.

Biermann, A.—Climatische Kurorte und ihre Indicationen. *Leipzig*, 1872, *O. Wigand*. 8o. VIII, 211 pp.

Cohnheim, Jul.—Untersuchungen über die embolischen Processe. Mit 1 Taf. in Farbendruck. *Berlin*, 1872. *Hirschwald*. 8o. VIII, 113 pp.

Merkel, Fr., Die linea nuchae suprema. Anatomisch und anthropologisch betrachtet. Mit 7 photogr. Taf. *Leipzig*. 1872. *Engelmann*. 8o. IV, 22 pp.

Mettenheimer, C.—Beobachtungen über die typhoiden Erkrankungen der französischen Kriegsgefangenen in Schwerin. *Berlin*, 1872. *Hirschwald*. 8o. 87 pp.

Any of these can be obtained through L. W. Schmidt, 24 Barclay street, New York City.

BOOK NOTICES.

Catalogue of the Library of the Surgeon General's Office, United States Army. With an alphabetical index of subjects. Washington: Government Printing Office, 1872. 1 vol., royal 8vo. pp. 454.

The library attached to the Army Medical Museum has been virtually created within the last decade. Its size, though not sufficient to embrace all or nearly all the works of reference desired by an earnest student of the past of medical science, is still respectable. This catalogue contains about 13,000 titles, including 13,330 volumes. Its deficiencies are frankly confessed in the prefatory memorandum, and we are informed that the present is regarded merely as a preliminary to a more extended catalogue, when the collection is nearer completion.

The plan followed is the same as that of the Library of Congress, being strictly alphabetical, and with like avoidance of capitalization of catch words in titles. Whether this latter is not carried too far, when even German nouns are commenced in lower case, we leave others to judge. Jacob Grimm is the only authority for such an innovation, and he has no disciples.

In examining further into the distinctness of the catalogue, it strikes us that sufficient care has not been exercised in distinguishing between different authors. For instance, there have been three medical writers this century bearing the name of *John Bell*, and not only does the catalogue make no distinction between them (though works of all three are in the library), but mixes up the titles of their books in an entirely heterogeneous manner. The distinction could easily be made by inserting in brackets after the name the place of residence, as in this instance: (of Edinburgh), (of New York), and (of Philadelphia). The arbitrary omission of a part of an author's name (*e.g.* see Xavier Bichat), is also objectionable.

In spite of these and a few other criticisms to which the Catalogue is open, it will be found of vast value to the investigator. In its future and more extended form we hope it will include writers of articles in all American medical periodical literature, a very complete collection of which the library aims to contain. Such an addition to it will redound to our national honor, and still more to the advantage of medical science.

In reference to the selection of the works forming the library, great credit is due those who have had the matter in charge. Few standard works within the last century are wanting. Yet we cannot forbear mentioning some whose absence is conspicuous; *e.g.* Alexander Humboldt's remarkable "*Versuche uber die gereizte Muskel und Nerven Faser*;" Goethe's Essays on Comparative Anatomy, which are the very foundation of the science; Tytler, the first English writer on cholera, etc. Doubtless these lacunæ will be filled as opportunity and appropriations permit, for "the eternal want of pence" vexes surgeons as well as other public men.

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, JUNE 8, 1872.

S. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

☞ Medical Societies and Clinical Reports, Notes and Observations, Foreign and Domestic Correspondence, News, etc., etc., of general medical interest, are respectfully solicited.

Articles of special importance, such especially as require original experimental research, analysis, or observation, will be liberally paid for.

☞ To insure publication, articles must be *practical, brief* as possible to do justice to the subject, and *carefully prepared*, so as to require little revision.

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We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession.

The Proprietor and Editors disclaim all responsibility for statements made over the names of correspondents.

DR. LIEBREICH'S ART CRITICISMS.

The eminent German Ophthalmologist, Dr. LIEBREICH, who, about a year ago, migrated from the continent to London, has created no small stir among the artists, art critics, and art teachers, by what they call his audacious explanations of the peculiarities of TURNER'S and MULREADY'S later paintings. After RUSKIN and his disciples had exalted TURNER and his style so high, and poured such withering contempt on all who are not prepared to echo their views, it is naturally most galling and unpleasing to them to have this surgeon attribute these "wonderful effects" to nothing more nor less than a disease of the eye.

Those of our readers not fully acquainted with the subject will readily comprehend Dr. LIEBREICH'S views from the following brief and lucid exposition of them in the New York *Nation*. The year in which TURNER'S style commenced to manifest its peculiarities was 1831, after which date his pictures, Dr. LIEBREICH maintains, are altogether out of drawing. This disease consists in an affection of the crystalline lens, which, in its first stages, causes in the eye of the painter a diffusion of light, preventing his seeing with precision and definiteness the lighted parts of the object of vision, and this diffusion got expression in the pictures in a sort of bluish haze; then afterwards, as the disease made progress, a limited opacity developed itself in the crystalline lens, the consequence of which was, speaking roughly, that the painter could see illuminated surfaces vertically but could hardly at all see horizontally; a mere point of light he saw as a vertical line which was the longer in proportion to the intensity of the light. Thus there will proceed from the sun in one of TURNER'S later pictures a vertical streak of light dividing the picture into two halves unconnected by any horizontal line. Objects less illuminated are distorted less, but still are all distorted more or less; thus persons in a boat, or houses near a canal, blend so entirely with their own reflections in the water that no horizontal line of demarcation between substance and shadow is in any way visible. The justice of these criticisms, which confounded many of his auditors, Dr. LIEBREICH is said to have demonstrated by means of a screen, a magic lantern, a lens, and a copy on glass of one of TURNER'S Venetian pictures, painted before his eyesight had become affected. Placing the copy in the magic lantern, he threw on the screen the picture as painted; then applying to the lantern a lens simulating the diseased eye, he showed to the audience the picture as TURNER painted it on his second visit to Venice in 1839; "the resemblance to his pictures painted after this date was certainly very striking," says the *Academy*.

Most of the English medical weeklies coincide with the foreign savant's demonstration. But *The Doctor*, a London monthly, attacked it bitterly, and "exposed its fallacies;" and the *Saturday Review*, which is nothing unless critical, as everybody knows, and has been in times past savage on the Turnerites, disputed Dr. LIEBREICH'S con-

clusions, though it blundered badly in its optics in doing so.

Later, a writer in the *Nation* defends TURNER on the ground that whether the Turneresque effects may or may not be produced by a diseased lens and simulated by an artificial one, TURNER, nevertheless, did wittingly what he put on canvass, as anybody can prove to themselves by looking at the sun and watching the effect on the visual powers of such excess of light. It will produce similar streaks of light and indistinctness of outline.

We presume the battle is by no means done yet. If the Turnerites take as their own the position that true art, the highest art, ought to represent objects as they appear to diseased or to half-blinded, tear-filled, dazzled eyes, and not to the eyes of health and comfort, they will doubtless maintain it with the same obstinacy as they have other equally sensible theories; and will, indeed, add still further to the lofty contempt with which they have hitherto regarded those artists who love to portray nature in her calm simplicity, in her sane and clear surroundings, in her positive yet infinitely suggesting forms, in her austerity and firmness, in her minute fidelity, and in her rigid positivism—qualities which they rank too low to allow any place in art.

ON TOLERANCE OF IMPURE AIR.

Tradition says that Mithridates Eupator, king of Pontus, fearing lest the many designs against his life should some day succeed by poison, so accustomed his constitution to quantities of fatal drugs, that when the time came that his son revolted and shut him in a tower, no amount that he could swallow affected his case-hardened system, and he was obliged to ask his Gaulish body guards to oblige him by thrusting a sword blade through his body.

Such success is not so incredible as it seems when we recall what enormous amounts of opium and corrosive sublimate are consumed by opium eaters; how the Styrian peasants thrive on arsenic, in doses that would kill a half dozen of us; and with what indifference decayed meat and vegetables are eaten by savage tribes.

What these examples prove is the singular *tolerance* which the human system acquires to the most poisonous ingesta. Any one who would seek to deduce from them the conclusion that such substances are, *therefore*, harmless in these quantities, would be laughed at. Yet we repeatedly see and hear an almost precisely analogous inference drawn in State medicine. Because men can be and are exposed to noxious odors and a poisoned atmosphere for long periods, those interested in the continuance of nuisances insist that the community at large will not suffer.

That a very singular tolerance to poison is shown by those engaged in many pursuits is very true. During the late terrible epidemic of yellow fever at Buenos Ayres the grave diggers, some three hundred in number, handling the corpses and clothing of the dead every day, escaped the disease entirely, not one of them, it is said, having even contracted it.

If anything seems certain in epidemiology, it is that sewer emanations are intensely poisonous. Yet it is an unquestioned fact that the sewer cleaners of London and other cities, exposed to these emanations for hours every day, are uncommonly healthy. It might be supposed that this was because the sewage had not yet been acted upon by the external air, the sun and heat. But where sewage is used as a fertilizer no bad effects seem to follow.

The *British Medical Journal* asserts that evidence of a positive character has been given that no injury to health has ever been traced to mismanaged sewage-farms. Dr. Christison states, with regard to the Craigintinny meadows, where certainly too large an amount of sewage is turned on to the land, that he is "satisfied that neither ty-

phus nor enteric fever, nor dysentery nor cholera, is to be encountered in or around them, whether in epidemic or non-epidemic seasons, more than in any other agricultural district of the neighborhood." Dr. Alfred Carpenter points out that, in the registration sub-district in which the Beddington farm is situated, while the births for the year ending April 1st, 1872, were at the rate of 33 per 1000, the death-rate was only 9 per 1000, and that the deaths "do not include a single case of fever." Dr. Gooch, of Eton, says: "As medical officer of the Eton Union, and attending almost every family in the neighborhood of the farm, I can confidently assert that not one single case of illness has occurred from the effects of the sewage;" and Mr. Palmer, of Rugby, tells how children who "looked pale and delicate" have become healthy and strong, and have had no illness whatever, "after living three years surrounded by sewage-irrigation," and this on a farm held up as a pattern of bad management.

Professor HAMMOND relates some striking instances of tolerance of organic poisons in a recent lecture on Public Hygiene, printed in the New York *Medical Journal*, a few of which we quote:—

In 1814, after the battle of Paris, four thousand dead horses remained on the soil during fifteen days, and were for that time subjected to a high temperature. Men were employed to gather them together in order that they might be burnt, but not one of those who undertook this disgusting work suffered in health in the least degree. During our own recent civil war similar instances of dead men and animals remaining on the ground several days in a state of decomposition occurred, and yet in no case did the neighboring inhabitants suffer any deterioration of health. Like examples could readily be adduced from the late Franco-German War. Those who have attended dissecting rooms in which there were numerous bodies in all stages of decomposition, will probably not be able to recall a single instance in which any of the students or attendants contracted disease from inspiring the gases and vapors which abounded. Probably the emanations from bodies dead of some highly-malignant disease, such as the plague, puerperal fever, or glanders, are more noxious than those which arise from animals which have died from accidents or non-putrid affections, but this even is a disputed point.

In our own case, however, we do recall one occasion when for two weeks we were obliged to cease our medical studies on account of typhoid symptoms brought about by too diligent dissection of a "fresh subject" far advanced in decomposition.

In the year 1828 a commission was appointed by the French Government to inquire into the sanitary relations of the large knackeries in Paris. It was found that all the men, women and children connected with these establishments were remarkable for the excellence of their health, and fine, ruddy appearance. The workmen generally were long-lived, and many of them had attained to extreme old age. Persons who resided in the vicinity of these places were likewise ascertained to be unusually healthy. Epidemic fever seemed to be powerless to affect the persons engaged in employments by which they were exposed almost continually to the most offensive emanations from decomposing animal matters, and even the cholera passed them by. In the whole course of their examination the members of the commission were unable to obtain the least evidence tending to show that the disgusting odors produced in the establishments in question were ever the cause of ill health.

The Church of the Capuchins, at Rome, affords a notable example. For several hundred years all the monks belonging to the monastery attached to that church who have died have been buried in a small cellar under the building. After the soft parts have become decomposed the skeletons are taken up and placed in their monastic garments around the walls of the room. Subsequently, when the joints likewise have yielded to the inroads of time, the bones are arranged on the walls and ceiling in the form of rosettes, arabesques, and other fanciful figures. There are always ten or twelve bodies in the ground, and as many skeletons standing around the room. The whole apartment is a charnel-house made up almost entirely of the *debris* of human bones in all stages of decomposition; and yet there

is no instance of any sickness having occurred among the thousands of persons who annually visit it, which could in the slightest degree be attributed to any influence exerted by the locality, and the monks who live over it, and who visit it constantly, are remarkable for their sleek and rotund appearance. Indeed, the good natured friar who has acted as the janitor and exhibitor of this strange chamber for several years is a wonderful specimen of robust health.

These examples are those of tolerance to poison, not proofs of an absence of poisonous material present. They offer no excuse for a neglect of cleanliness, and no palliation for the maintenance of nuisances. Examples on the other side are far more numerous and positive. Boards of Health and Sanitary Inspectors ought not to be misled by such instances.

Notes and Comments.

Action of Digitalis.

M. Gourvat (*Gazette Medicale*, 1871, Nos. 26, etc., and 1872, 1, 2, 4, 5) finds that moderate doses of digitaline given to frogs paralyze the motor nerves of voluntary muscles; and larger doses destroy the irritability of the muscles themselves. Involuntary muscular fibres appear to be stimulated by it. Moderate doses cause a transient contraction of the arterioles; large doses cause a longer contraction. In both cases the contraction of the arterioles is succeeded by paralysis and dilatation. The contraction is caused by the action of the digitaline on the vasomotor nerves, and not on the walls of the arterioles themselves. The beats of the heart are rendered stronger, slower, and more regular, by moderate doses. The arterial tension is increased. The retardation of the pulse is due to the increase in the arterial tension, and is proportioned to it. The contraction of the arterioles lessens the secretion from the skin, mucous membranes, and glands, except the kidneys, the urine being increased.

Physiological Action of Tobacco Smoke.

Vohl and Eulenberg (*Arch. Pharm. Chem.*, cxlvii, page 130) find that the amount of nicotine in snuff and tobacco for chewing is so minute that nothing like nicotine poisoning can result from their use. The action of tobacco smoke and tobacco juice is not due to nicotine, for it contains none, but to pyridine, picoline, colledine, and other bases, forming a homologous series, which are produced during the combustion of the tobacco. The reason why stronger tobacco can be smoked in a cigar than in a pipe is, that in the pipe a large quantity of pyridine is formed, which is very volatile and stupefying; while in a cigar little pyridine and much colledine are formed. The unpleasant symptoms experienced by persons just beginning to smoke, or who smoke to excess, as well as the poisonous effect of tobacco juice, are not due to nicotine, but to the pyridine and picoline bases; and they have probably been attributed to nicotine because these bases, especially those having a high boiling point, greatly resemble nicotine both in smell and in physiological action, producing contraction of the pupil, difficult respiration, convulsions, and death. They do not act so quickly when injected under the skin as when taken into the stomach, and their action is less rapid than that of nicotine. Other plants which are sometimes used for smoking, though they contain no nicotine, such as dandelion, willow wood, and stramonium, yield pyridine bases, whose action is very like those from tobacco, though rather weaker. Pure picoline from Boghead coal had a similar action; and its vapor was poisonous, producing irritation of the respiratory passages, slight convulsions, and death. None of these, except the bases from willow wood, produced contraction of the pupil. The authors consider that the effects produced by opium smoking are not due to the alkaloids in the opium, but to the bases formed during its combustion; and that the difference between it and tobacco is owing to different bases being formed by their combustion.

An Apt Reproof.

There are some anatomists who violently itch to prove the identity of man and monkey. Those eminent osteologists, MM. Pruner-Bey and Paul Broca, are not free from this infection. A review in the last number of the *Journal of Psychological*

Medicine relates this apt reproof administered them by M. DE QUATREFAGES.

This able physiologist and anthropologist, in admitting that the importance of the bone discoveries at Cro-Maguon can hardly be too highly estimated, is anxious to warn his hearers of the danger and fallacy of assigning significance to characters of which in effect we know neither the cause nor the value, and he strongly criticises the tendency shown by his colleagues, Messrs. PRUNER-BEY and BROCA, to regard certain characters as determined signs of inferiority or of superiority; very aptly illustrating the unsoundness of the practice which he condemns, by remarking that, although M. PRUNER-BEY sees a sign of inferiority in a faintly-marked disposition of the parietal bones to form a ridge at the sagittal suture, as found indeed occasionally among some races of men who are justly placed near the lowest stages of civilization, he himself has noticed it recently in a perfectly pure white man, one of the most distinguished of the delegates who had come to the Paris Congress of Science from America, in whom it was more strongly marked than in any skull in the Paris Museum.

After that, M. DE QUATREFAGES may surely be pardoned for begging for the exercise of a little caution on the part of his brother anthropologists, before they endeavor to support preconceived views of the origin and descent of the human race, by giving undue significance to assumed agreements between fossil man and apes. He thinks that the view of Europe having been originally peopled by a race of only one cephalic conformation must be wholly laid aside by the discoveries of Cro-Magnon, and he agrees with M. BROCA in assuming the coexistence of both the brachycephalic and the dolichocephalic types, and sees in the cave-dwellers of the Stone Age the representatives of the two forms.

Mental Effects of Rheumatism.

Dr. FAURE says, in a recent French Journal, that a man who is subject to rheumatism will very often tell you, if you ask him—for he has no reason to refer what passes in his mind to the sensations in his arms or legs, or elsewhere in his muscular system—that he has moments of despondency without cause, of inquietude, of forlornness, inexplicable to himself. Then he is discouraged without cause, and sees everything in the shade; that which ought scarcely to be the object of a slight care, becomes the cause of a cruel torment; he is without force, his thoughts can be fixed on nothing, all intellectual work is impossible; if he wishes to solve a problem, he soon experiences fatigue and heaviness of his head, which often turn into a violent headache; then his sensations are altered, his affections cease, he is indifferent to everything; that which has the most right or power over his mind, remembrances which are most dear or most painful, have no interest for him. His character has changed. He is conscious of his condition, and can for a few minutes rouse himself out of it. A crisis may follow, his head is congested, he feels quite giddy. Finally, all these symptoms disappear, and his mind recovers its tone and clearness. The attacks vary much with individual disposition.

Digestion of Calomel.

In his recent lecture on "Diet and Medicine, Dr. SYMES THOMPSON showed that some drugs undergo a process of solution within the body analogous to that which food passes through under the influence of the digestive juices. With the assistance of Professor HEATON he demonstrated TUSON's experiment on calomel. In one vessel calomel and hydrochloric acid were placed, and in another calomel, acid, and pepsine. After digestion for two or three hours at the temperature of the blood (care being taken that the heat should not rise above 140 degrees Fahr.), the contents of both vessels were thrown on filters. The filtered liquid from the second gave a black precipitate with sulphuretted hydrogen, showing that pepsine had rendered the calomel soluble, while the liquid from the first was unaffected by the gas. This experiment has served to remove much of the difficulty previously felt of accounting for the effect of a salt insoluble in acid, and is of value as showing why calomel does not produce its characteristic effects in cholera and other conditions in which the digestive powers are in abeyance, or when the active ingredients of the gastric juice are wanting.

Cure for Colds.

A Berlin correspondent of the London *Druggists' Circular* says:—The dreary days of winter have passed away, and as I hope, colds and catarrhs have left likewise, and if

I now mention a good cure for these enemies of our winter enjoyments, it may be said that it comes *post festum*, but I believe it is better to be late than not to come at all, inasmuch as the remedy, indeed, has been found very effective, and its application very simple and not unpleasant to the patient. It is prepared in the following manner. A wide-mouth glass-stoppered bottle is filled with amianth, or better, with cotton, and then the following mixture is poured on, so that the cotton or amianth is perfectly saturated with it:—

℞. Acid. carbolic puriss., 5.0, ℈iv.
Liq. Ammon. caustic, 6.0, ʒiss.
spec. gravity 0.960.
Aquæ destillat., 10.0. ʒij. ℈ij.
Spirit. vini. rectificatiss, ℈iv.

The vapors are drawn into the nose frequently during the day, and now and then inhaled into the mouth. A medical gentleman of Stettin, who is renowned not only for his skill as a physician, but likewise for the tremendous catarrh that troubles him regularly every winter, has used this olfactorium anticatarrhoicum with perfect success on his own person, and afterwards on many of his patients, and recommends it highly.

Chinese Treatment of Tetanus.

This mode of treatment of tetanus has been seen by English physicians in China and India to be successful: The patient smokes in a pipe a mixture of from twenty to twenty-five centigrammes of crude opium and tea or rose leaves, which are worked up with a small quantity of molasses. When smoking he must inspire as deeply as possible, and continue this operation until the narcotic influence is noticed. This continues then, as a rule, three or four hours. The smoking is repeated as soon as the tetanic symptoms reappear. In the meantime as much nourishment as possible is given. In using opium thus it must be remembered that its narcotic effect is somewhat neutralized by tobacco.

A Medical Lesson from French History.

A French medical journal contains a medical study of the royal house of Valois, by Dr. CORLIEU.

He observes that although Francis I, chief of that race, had five children, of whom three were boys, and his son and successor, Henry II, had ten children, of whom five were sons, yet the crown of France was only preserved in the family seventy-five years. The dynasty, struck in its origin, and if marked for decay by the "finger of God," was, perhaps, so also, according to M. Corlieu, by the seal of *syphilis*.

Francis I, chief of the dynasty of Valois, born at Cognac, 12th September, 1494, died at Rambouillet the 31st March, 1547, at the age of fifty-three years, *consumed* at the time by political embarrassments, by the effects of the debauched life he led, by an affection of the urinary passages, a perineal fistula, and the remains of *syphilis*. The issue of his marriage with Claude of France, daughter of Louis XII, were five children, namely, Francis, dauphin, died in infancy, 1533; Charles, Duke of Orleans, died in 1545, at 23 years of age; Charlotte, died in infancy; Henry II, died by accident in 1559, aged 40 years; Marguerite of France, wife of the Duke of Savoy, died in 1547, aged 24 years. Thus death rapidly mowed down the first stock; nor was it less sparing toward the second. Henry II by his marriage with Catharine de Medicis had ten children, five sons and five daughters, namely: Francis II, died of *scrofula* in 1560, aged 17; Louis of Orleans, died in infancy; Charles IX, died of *phthisis* in 1574, aged 24; Henry III, assassinated at the age of 38; Francis of Alencon died of phthisis in 1584, at 30. On the part of the Queen of Navarre the five daughters were no more favored. Elizabeth of France, third wife of Philip II, of Spain, died in 1568, at 23 years of age, leaving two children; Claude of France, wife of Charles II, of Lorraine, died in 1575, aged 27, having borne nine children; Jeanne of France died in infancy; Victoire of France died also in infancy; Marguerite of Valois died in 1615, at the comparatively ripe age of 62. Henry III married Louise of Lorraine, but had no issue.

On Alcohol.

In a memoir on alcohol in health and disease, Dr. MARVAUD says that alcohol exercises on the organism in health a complete action, which depends—1st. On its presence in a free state in the blood; 2d. On the alterations which it undergoes in the economy. In its free state in the blood alcohol acts like the anæsthetics. It also alters the form of the blood globules, and by its influence on the nerves it influences the respiration and circulation. Alcohol, when changed in the

economy, is not a respiratory food, but an anti-calorific, for it lessens the amount of carbonic acid exhaled, and lowers the temperature. It favors the production of fat. Its double title as excitant of the nervous system and opponent to destruction, assures to alcohol a considerable and useful place in hygiene, as the food of the poor, and those who take much bodily labor.

Comparative Mortality of Phthisis in Different States.

Dr. CONSTANTIN PAUL (*Rev. de Therap.*) mentions that in France the mortality from consumption is 10 per cent., whilst in Paris it is 13.4 per 100. If the statistical records of other countries are credible, in Rome it is 6 per 100; in Naples, 8; in Venice, 8; in Turin, 9; in Geneva, 9.7; in England, 11; in Belgium, 16; in Berlin, 17.5; in Vienna, 20; in Hamburg, 22; and in Boston, United States, it is 23 per cent. In general, the mortality from phthisis is less in temperate climates.

The Medical Use of Ergoted Indian Corn.

The black fungus of Indian corn is familiar to all our country readers. In the *Rivista Clinica di Bologna* for March, 1872, there is a lengthened report by Professor GAMBERINI on the employment of it in a case of psoriasis of long standing. The patient, a woman of forty years of age, had been admitted into the Hospital of St. Orsola, in Bolonga, several times, and discharged on each occasion with manifest advantage from the treatment pursued. This consisted chiefly of vapor baths, liquor of Devergie, liquor of Donovan, carbolic acid administered internally and applied externally, the use of an ointment made from a kind of pitch, etc.

On her last appearance at the hospital all these curative agencies were brought into application, without any alleviation of the malady; they seemed to be entirely useless, indeed. It was at this juncture that Professor GAMBERINI determined to put to the test the alcoholic tincture of corrupted maize, which had been strongly recommended for all cases of chronic dermatosis by Professor CESARE LOMBROSO, of Paria, from *a priori* considerations, and tried with success by Professor SCARENZIO on a case of psoriasis. The treatment extended over a period of three months. It began by the administration of six grammes of the tincture in sixty grammes of distilled water, to be taken in two or three doses. The number of grammes administered daily was increased gradually up to eighty. An ointment made of thirty grammes of the tincture to sixty grammes of hog's lard was also used as an application to the affected parts. The following is a *resume* of the phenomenographia which accompanied the internal use of the medicine. From the first the patient experienced frequent yawning and eructations. The appetite stood at the normal degree for some days; afterwards it went on gradually increasing. A feeling of heat was experienced in the soles of the feet, and also on the backs of the hands. The urine was colored, but did not produce smarting. The patient had a horror of baths generally, but delighted to put her feet and hands in water. She could not bear the weight of her usual bed-clothes. She did not experience any diarrhœa or costiveness. The muscular force at first decreased, but afterwards augmented. The patient became more joyful than her wont. She was naturally of a melancholic temperament. There was no perceptible change in the pulse. When it was found necessary to suspend the employment of the remedy, owing to the patient's disgust at it, it was discovered that the *psoriasis* was not so generally spread over the body; that it was limited to the elbows, knees, along the tibiæ, and very few places on the thighs and arm. The scales, which were at first large and numerous, were reduced to almost nothing, and the *pruritus* had almost disappeared. If the use of the remedy could have been continued there is a probability that the disease might have been entirely conquered; as it was, the result was manifestly favorable.

Professor GAMBERINI tried this remedy in a case of old *lupus*, but the stomach of the patient could not support the smallest doses after the first few days. He tried it again in a case of *psoriasis diffusa chronica*, with the same favorable results mentioned above. He has no doubt of the value of the remedy.

Substitution of Carbolic or Phenic Acid for Creasote.

In addition to what we said last week, we may add, that *The London Pharmaceutical Journal*, for May, contains the communication referred to, from Mr. T. N. R. MORSON, of the well known chemical manufacturing

firm of T. Morson & Son, calling attention to the substitution of carbolic acid for wood creasote.

No good test has hitherto been published for discriminating between these two bodies. Mr. THOS. MORSON, in making some experiments on adulterated samples of creasote, discovered that true wood creasote is insoluble or nearly so in glycerine, carbolic or phenic acid; on the contrary, dissolving in all proportions, and any large amount of this latter substance, if mixed with true creasote, will render the creasote soluble.

For purposes of internal administration, as also for preservation of food, it is claimed that carbolic acid does not replace creasote. As an application for burns, wood creasote appears to answer a better purpose than carbolic acid, and occasions less pain on application.

In Europe, where creasote is more extensively used for the preservation of food than in this country, the substitution of carbolic acid is more important on account of the therapeutic effects of the two differing.

The price of wood creasote in the English market is about three times the price of crystallized carbolic acid.

The Howard Hospital.

The Eighteenth Annual Report of this institution shows that it is doing a good work. It is situated at 1518 and 1520 Lombard street, Philadelphia. More than 90,000 cases have been treated at this hospital since it was commenced, and the average number of applicants during the last seven years has been 7500 each year.

Dr. LAWRENCE TURNBULL, known to our readers as an occasional contributor to our columns, has charge of the department of the Eye and Ear, and during the seventeen years he has been connected with the institution has had in its clinics over five thousand cases of disease of these organs to treat.

Detroit Medical College.

This, one of the youngest of our medical colleges, seems to be maintaining a vigorous life. It has steadily grown in favor, and seems to be earnestly devoted to the true advancement of medical teaching. The regular lecture term of this college has hitherto been held in the Spring and Summer months. There have been so many and obvious disadvantages connected with this arrangement that, after mature consideration, it has seemed best to the Trustees and Faculty to have it permanently discontinued. The regular course of instruction will, therefore, take place hereafter in the Autumn and Winter, beginning on the first Wednesday in October, and continuing five months.

There will be a preliminary term, which will open on the first Wednesday in September, and continue until the commencement of the regular term. Instruction will also be given during the Spring and Summer by means of lectures on special subjects and practice in the daily clinics.

Surgeon General, U. S. Navy.

Surgeon General J. M. FOLTZ has been retired from active service by reason of age, and Medical Director JAMES C. PALMER has been appointed to the position of Surgeon General, U. S. Navy, and the appointment confirmed by the United States Senate.

On Xylol.

Xylol, the new remedy against small-pox, has now been fairly tried, and is found a most useful specific against this dreadful disease. Dr. Nagel, in Berlin, has employed it in eighty-one cases, counting among them eight children under two years, six of them not vaccinated; eleven children between two and ten years, four not vaccinated; twenty patients up to twenty-five years, the rest over that, the eldest being sixty-one years of age. Of these patients, of whom thirty-four had the small-pox in a very advanced state, four died, two children, unvaccinated, three weeks, and nine months old, respectively, an adult thirty-two years old, the latter suffering besides from inflammation of the lungs. Dr. Nagel describes Xylol as the best remedy against small-pox known, as yet; it prevents the former large mortality, and although it does not prevent the breaking out of the disease, it prevents its assuming a grave character.

Lithotomy and Hydrotherapeia.

The following is an extract from an ancient Welsh manuscript entitled *Meddygon Myddfai*, written about A. D. 1300. It is curious, first, on account of the attempts to limit febrile action by frequent use of baths; secondly, on account of the droll directions given for putting the patient in position for operation. The *Cambrian Register* for 1796 is responsible for the translation.

"*Maen-Dioti* (*Lithotomy*). A hard stone,

in this way shall relief be given, when it is extracted. Take a stick and place it in the bend of the patient's hams; and then place his two arms within his hams and turn them upwards round the stick, and tie a bandage round his two wrists and over his neck, and place him with his belly upwards, with something high under his hips, and from the left side of his privities extract the stone; and afterwards put the patient in a water bath that day, and the next morning in a water bath first, and after that in a confecture bath; and from that lay him in his bed with his belly upward, and clean his wound, and apply lint with salt butter to it; and keep him in that state until it shall be known whether he will escape. He is to be left for a night and a day before performing this operation without meat and without drink, and to be put into a bath."

CORRESPONDENCE.

Hydrate of Chloral and Bromide of Potassium Successfully Employed in Poisoning by Strychnia.

EDS. MEDICAL AND SURGICAL REPORTER:

Believing it to be the duty of the physician as well as of the true humanitarian, to disclose for the public benefit whatever remedies he has found to be efficient in relieving suffering and arresting the progress of disease, I submit the following statement in regard to the beneficial effect produced by hydrate of chloral and bromide of potassium.

On the morning of November 20, 1871, Mr. E. R. Burk, a clerk in the Lochiel Iron Company, of this city, and a gentleman of fine intellectual attainments, while suffering from an aberration of mind superinduced by reverses in life, took one (1) grain of strychnia. The twitching of the muscles which commenced in five minutes afterwards attracted the attention of his wife, and in reply to her demand for an explanation of so singular an occurrence, Mr. Burk informed her that he had taken strychnia. Being alarmed, Mrs. Burk called in friends to her assistance, and I was immediately sent for and reached the patient in about fifty minutes after the supposed fatal dose had been taken.

Before leaving my office I provided myself with the ordinary remedies employed in such cases, but fearing from the description given me of the patient that these would not be available, I also prepared the following remedy:—

Hydrate of chloral, ℥ss; bromide of potassium, ʒiii; water, ℥iss, and syrup of orange, ℥iiss.

On arriving at the patient's residence I found him lying on the kitchen floor with tetanoid convulsions affecting the muscles of the trunk and spine, a rigid and tetanoid state of the muscles of the lower and upper extremities, the limbs extended and the feet and hands drawn powerfully inwards, the patient seeming to touch the floor only with his head and heels. The eyes were drawn upwards and greatly congested, jaws locked, and deglutition impossible, with foaming at the mouth similar to that observed in patients suffering from hydrophobia; skin cold and clammy and of a dark livid hue; pulse imperceptible, and the sufferer unconscious for some time before my arrival.

Treatment:—I took one tablespoonful of the mixture, added a tablespoonful of water, then wiping the saliva from the mouth, I passed through an opening where several teeth did not meet, several teaspoonsful of the mixture, some of it running down both sides of the mouth; but very soon the muscles of the jaws relaxed, the mouth opened, and I then gave the patient another teaspoonful; as soon as it reached the throat it seemed that every nerve belonging to the throat and head was relieved from the influence of the strychnia. The muscles relaxed, the eyes resumed their natural appearance and position, the countenance changed in an instant; the patient turned his head, of which he then had control, recognizing me by his side, said, "Doctor, let me have some more of that medicine; I feel this dreadful feeling passing down over me." I hurriedly gave him a dose or two more; after taking it he felt no more pain anywhere except in the hips and legs; after taking a few more doses he informed me the pain had subsided; the spasms had ceased, and he felt quite comfortable; soon afterwards he fell into a gentle sleep. The treatment of this case did not consume over one minute from the time I wiped the saliva from the patient's mouth until he was completely relieved from the poisonous influence of the strychnia. It is my opinion, from the observations and investigations at the time and since, that the poison of the strychnine was neutralized by the mixture as it came

in contact with the mucous membrane, from which it followed the nervous system in all its varied ramifications. I had the patient removed to another apartment and placed on a pallet; he soon became stomach sick and vomited copiously; this was immediately followed by a copious evacuation from his bowels; he then rested comfortably for a half hour longer, when he again complained of cramps in the legs, which were speedily relieved by administering a teaspoonful of the mixture unadulterated with water. The patient had no return of the cramps, and experienced no inconvenience, his appetite continued good, and he could have been out of bed the next day had it not been for soreness of the muscles produced by the intense pain to which they had been subjected. The third day he moved about as freely as ever, and his nerves seemed to be stronger than they had been for several weeks.

I report this case and treatment for the consideration of the profession, and to elicit inquiry among medical men as to the merit of this remedy.

E. H. COOVER, M. D.

Harrisburg, Pa., May 20, 1872.

NEWS AND MISCELLANY.

Infants' Hospital at the Seaside.

We have been informed that a convalescent hospital for children has been established at Atlantic City, with a physician (Dr. CASTLE), a matron, housekeeper, and nurses, with all the necessary appliances, etc. It will be opened on the 25th of this month (June). The house is pleasantly situated on Pacific avenue, near the shore, and will accommodate for the present fifteen children. For board and other particulars address one of the managers, JAMES S. WHITNEY, ESQ., 1815 Vine street, Philadelphia.

This has been long a desirable object with physicians, as sometimes after all their efforts nothing remains but a change to the sea shore for the welfare of the little patient. The difficulty, heretofore, has been the expense. Now, board can be had for a sick child at a *very moderate* rate, with the advantages of physician, nurse and medicines. This will be of great benefit in cases of cholera infantum, marasmus, rachitis, hip disease, scrofula, and even cases of phthisis, besides being very useful in all cases convalescent from acute disease. Such institutions have been established in France and England with excellent results.

District Medical Society of Mercer Co., N. J.

The District Medical Society of Mercer county, N. J., met in the City Hall, Trenton, June 4th, Dr. W. W. L. PHILLIPS presiding. In the place of the regular essays usual on these occasions, the members had an interesting discussion on the comparative merits of city and country practitioners. They went at considerable length into the influences that bore upon each class, and while they granted to the few prominent men of the cities superior opportunities for investigation on many subjects, still they thought the necessity for self-reliance and careful observation made the rural practitioner a better reasoner than the generality of city physicians. It was likewise stated that many of the most eminent authorities in the profession, teachers well known to the medical world, began as country doctors.

Dr. James A. Exton, of Hightstown, was elected a member, and as essayists for the next meeting, Drs. Lalor, Quick and Bodine were appointed.

Dr. Shepherd was appointed reporter to the State Medical Society for the next session.

Some other matters were discussed, after which the Society adjourned to the first Tuesday in July.

A Hint to Nurses.

You know what a racket is caused, even by the most careful hand, in supplying coals to a grate or stove, and how, when the performance is undertaken by the servant, it becomes almost distracting. If you don't remember, take notice the first time you are ill, or you have a dear patient in your care, or the baby is in a quiet slumber. Let some one bring on her coal scuttle or shovel, and revive your recollection. Well, the remedy we suggest is to put the coals in little paper bags, each holding about a shovelful. These can be laid quietly on the fire, and as the paper ignites, the coals will softly settle in place. You may fill a coal scuttle or box with such parcels ready for use. For a sick room, a nursery at night, or even for a library, the plan is admirable. Just try it. Besides, it is so cleanly. If you don't choose to provide yourselves with paper bags, you can wrap the coals in pieces of newspaper at your leisure, and have them ready for use when occasion requires.

Charitable Bequests by a Physician.

The late Dr. GEORGE W. WIMLEY, of this city, leaves, by h s will, $5000 for the Kensington Soup Society, to be invested in good real estate, the income of which is to be annually applied to the purchase of bread, to be distributed to the deserving poor of the District of Kensington, at the rate of three hundred loaves per day on Monday and Saturday of each week. The residue of his estate is given to the Pennsylvania Training School for Feeble-minded Children.

Death-rate in the United States and Europe.

It is a curious fact, one well worth knowing, that the death-rate in Europe is nearly double what it is in the United States, averaging yearly one out of every forty-three inhabitants, while here it is only one out of every eighty-one. Of the leading countries of Europe, France leads in its mortality, the average being one death to thirty-two people; and England appears to be the healthiest, the deaths being one to every forty-six. In the United States there is a wide range of difference. In Arkansas, for instance, the annual deaths are one to every forty-nine inhabitants, while in Oregon the rate is only one to every two hundred and nine. It appears that the Northwestern States average the healthiest, and the Gulf States the sickliest.

Treatment of Hydrothorax.

In a recent paper contained in the "Bulletin Générale de Thérapeutique" (vol. lxxxi, liv.2), M. C. Paul gives eight cases of acute pleurisy which, as soon as the diagnosis was ascertained, he at once treated by puncture of the chest. The results were extremely favorable, and materially shortened the duration of the disease, all the patients being perfectly restored to health in the course of three weeks. M. Paul thinks the mode of treatment especially advantageous for private cases, and gives as a prognostic sign, that when the effusion coagulates after being withdrawn, there is little or no tendency in it to re-collect.

Mercy Hospital, Pittsburgh, Pa.

The Medical Board of this institution has decided upon a course of daily clinics, which will be of great value to medical students as well as to many who are already practicing the profession. These clinics, as inaugurated, begin at nine o'clock A. M., of each day. The order for the week will be as follows:—Monday, general medical treatment; Tuesday, diseases of women and children; Wednesday, surgical treatment; and beginning on Thursday, the same order will be gone through again during the remainder of the week.

—Dr. Wm. Stimpson, Secretary of the Chicago Academy of Sciences, died at Ilchester, Md., May 26th. His life had been devoted to natural science, and his researches and collections on the South Atlantic coast enrich the museums of several celebrated academies.

—Dr. Nelaton, the eminent French surgeon, is reported to be in failing health, caused by an internal tumor which cannot be reached or cured. In the patient expectation of death, the afflicted gentleman beguiles the time by translating "The Odyssey."

—Dr. Luther Jewell, who died at Lafayette, Ind., a few days ago, at the age of 66, was the oldest physician in the city, having practiced there thirty-eight years.

Absent.

Prof. D. Hayes Agnew, of the University of Pennsylvania, will be absent in Europe until September next.

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MARRIAGES.

Bancroft—Mathers.—May 29, in the Eleventh Street M. E. Church, by Rev. L. Bancroft, assisted by Rev. T. A. Fernley and Rev. Dr. Cooke, Dr. William Bancroft and Miss Florence May Mathers, all of Philadelphia.

Bulkley—Mell'ck.—May 28, at the residence of the bride's parents, Bergen Point, N. J., by the Rev. Henry W. F. Jones, Lucius Duncan Bulkley, M. D., of New York city, and Kate La Rue, eldest daughter of Andrew D. Mellick, Esq.

Dodd—Ward.—At the residence of the bride, Newark, N. J., May 22, by Drs. Dowling and Hague, Bethuel L. Dodd, M. D., of Newark, and Miss Gertrude R. Ward, daughter of Richard R. Ward, Esq., of New York.

Murphy—Parrish.—May 9, by the Rev. F. B. Hodge, J. A. Murphy, M. D., and Miss Fanny E. Parrish, both of Wilkesbarre, Pa.

Perkins—Livingston.—In Newport, Vermont, May 23, by Rev. R. V. Hall, Nathaniel R. Perkins, M. D., of Haverhill, N. H., and Miss Clara A., eldest daughter of L. D. Livingston, Esq., of Newport.

Rose—Wilson.—May 29, 1872, by Rev. L. B. Hoffman, assisted by Rev. J. Dyson, J. F. Rose, M. D., and S. Jennie Wilson, both of Oxford, Pa.

Smith—Williamson.—At the residence of Dr. Williamson, Waynesville, Ohio, on the 16 h day of May, 1872, by the Rev. E. McHugh, Mr. Lewis S. Smith and Miss Medora Williamson, all of Waynesville, Ohio.

Speer—Bissell.—In Pittsburgh, Pa., May 16, by Rev. William Speer, D. D., of Philadelphia, Alexander M. Speer, M. D., and Ellen C., daughter of the late John Bissell, Sr.

Street—Street.—May 9 by the Rev. T. M. Crawford, Charles H. Street, M. D., and Miss Lavinia Street, both of Harford county, Md.

DIED.

Brown.—May 14, Edward Ingersoll, youngest child of Dr. W. K. and Sarah H. Brown, aged 11 years.

Campbell.—Near Cambridge, Guernsey county, Ohio, of congestion of the lungs, Mr. John Rhes Campbell, son of Dr. William and Emily Campbell, aged 23 years.

Dunott.—May 5, at Frederick, Md., Sidney P., daughter of Dr. Justus Dunott, aged 35 years.

Dutton.—In Barton Landing, Vermont, March 24, of croup, Minnie Estella, daughter of Dr. T. T. and Mary J. Dutton, aged 3 years and 7 months.

Also, May 15, of consumption, Mary J., wife of Dr. T. T. Dutton, aged 36 years and 9 months.

Hasson.—Suddenly, at West Newton, Pa., May 10, 1872, Dr. Hasson.

Jewett.—Dr. Luther Jewett, son of Dr. Luther Jewett, deceased, of St. Johnsbury, Vermont, died in Lafayette, Indiana, May 13.

McGee.—In Jersey City, N. J., May 4, 1872, in the 26th year of her age, Mrs. Frances Eureka McGee, wife of John Flavel McGee, Esq., and daughter of Dr. Henry S. and Amelia Harris, of Allamuchy, New Jersey.

McIlravy.—In Victoria, Knox county, Illinois, May 6, 1872, of congestion of the brain, Mrs. Ruth D., wife of H. C. McIlravy, M. D., and daughter of Thomas and Ruth Herron.

Taylor.—At Memphis, Tenn., May 7, Dr. William V. Taylor, aged 82 years.

Thayer.—In North Hartland, Vermont, May 3, at the residence of her son-in-law (James N. Willard), Mrs. Ruth P., wife of the late Dr. S. W. Thayer, formerly of Thetford, Vermont, aged 87 years.